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NO.6

An Essay
on
Bilious Remittent Fever
of
Charleston So. Carolina

by
Saml. Benjn. Rush Finley

Passed March 25th
1824
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It is not with the vain hope of contributing any thing new in practice or amusing and instructive in Theory, that I have undertaken this, my first essay; but rather in conformity with the rules and regulations of this University — The subject of which it treats is one, which deeply interests the mind of every medical practitioner, and involves the welfare of that section of our extensive country to which I belong — As regards its general history, I may appear to exaggerate, but to confirm my statements I would refer to those who have witnessed the disease as it occurs with us — And that I may not incur the charge of being attached too much to early principles relative to the treatment laid down, I hope it will be remembered that no cause exerts a more marked influence upon the nature of man than Climate, and that the same remedies in one climate will not always suit the same disease in another — This remark is daily verified — With these few observations, if this essay answers the object for which it was intended, my most ample wishes will be gratified ——

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The subject which I have selected for my inaugural essay is the Bilious Remittent Fever — In this attempt, I will give as comprehensive and, at the same time as concise a view of its character, treatment and terminations, as my time and experience will admit — Neither will I trust alone to my own observations, (ample field for which has been afforded, by my attendance at the Hospital of Charleston for nearly three years) but to confirm my statements I shall resort to the experience of others whose reputation entitle them to a degree of credibility which may be denied me as a tyro in the profession — And here I would beg to remark that the disease as described by myself, may appear essentially different from that in our elementary works upon the subject, but it is only for Southern physicians or those practising in tropical climes, to determine whether my description attaches more importance to it than is warranted by facts — Let the numerous families who are annually clothed in the sable garb of mourning decide whether my statements have been embellished by the fervour of imagination, or the more certain and satis-

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tisfactory evidence of truth and observation — Scarcely a summer leaves our State before it has forever dissolved some of the strongest ties of friendship and affection — The enterprising stranger too, who has relinquished respected friends and relatives, to seek that hospitality and liberty which is refused him in the land of his birth, avoids one evil, but to sustain another and more fatal — So dangerous and far-spread is the influence of this dreadful malady that it may almost be denominated one of the "Opprobria Medicorum" — No length of residence near its sources can completely climatise one, but many instances are known where a residence of thirty or forty years exposed to its influence has been of no avail and the miserable victim of incredulity or obstinacy has been felled at last by its power when perhaps he was most securely lulled to rest by the fancied preventive of habit and custom — Nor will one attack prevent the recurrence of another, but as often as exposure to the same causes exist, so often will the disease return — Should any one be so fortunate as to come off victorious ~~over~~ after escape repeated attacks, still

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such a train of troublesome maladies are left behind as will scarcely ever be totally eradicated by an after life of temperance and caution. If such then are the consequences of this much and justly dreaded disease, how cautious should we be in forming our opinions ~~for~~ respecting its treatment and cure — Our endeavours to subdue it should be unceasing ~~and persevering~~, no danger, no labour and no expense should be dreaded which tends to throw any light upon a subject of such immense interest to the community — I shall next attempt to point out the symptoms, most common modes of treatment and make any other remarks upon the subject as may have any connection with it —

In the lower or Eastern portion of our State this form of disease is by far the most important we have to contend with, when we take into consideration the great liability there is to receive it, the danger consequent to an attack, the frequency of its occurrence and the great responsibility we incur with regard to the plan of treatment we pursue — Its first attacks are seen as early as April, from which time it increases in frequency until the winter months when it abates — Its prevalence and violence are however greater in the months of June, July, August, Septem-

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ber and October – some cases are as late as December and January, but the seeds of disease in these latter cases were imbibed during the previous summer — The symptoms vary considerably not only at different periods of the season, but also at the commencement of its prevalence being by far more strongly marked in some cases than in others — This fact demands our most serious attention, for by using those remedies in the first stages which are either totally inefficacious or injuriously applied, we may lose time which can never be regained and the patient sink a miserable victim to timidity or folly — Of the seat of fever various theories have been advanced; some have fixed it on the brain, others in thoracic viscera, and others again affirm that the contents of the abdomen are the principal sufferers — In our climate at least, the last appears to be the most correct, as the abdominal symptoms are the most prominent, the biliary apparatus being either totally disordered or its secretions vitiated, which has given rise to the name by which it is designated — Nor will this appear singular when we consider the cause from which it originates, viz: the effluvia arising from vegetable decomposition, or other circumstances equally capable to produce it

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Having made these remarks I shall now endeavour to mark out the most prominent symptoms — This disease first makes its appearance by a most singular sensation, which has been by some described as a heavy weight, and by others as a dull, obtuse, pain over the Epigastric region and along the upper surface of the Liver — During this period the person experiences want of appetite, with an uneasy load at the stomach causing nausea and a constant desire to vomit — This exists several days previous to the attack accompanied with languor, debility, constant yawning and sighing — The patient complains of restlessness especially at nights, being unable to sleep, or should he for a moment close his eyes, his slumbers are interrupted by sudden starts occasioned by uneasy and distressing dreams — This is frequently succeeded by a chillness, although not invariably so, and seldom or never proceeds to a rigor. This symptom has, in most cases I have seen, made its appearance about midnight or before the dawn of day, — Distracting pains in the head, back and calves of the legs soon come on said by many to resemble the pain in those parts consequent to the fatigue of a long journey — The pain in the head affects generally the fore head, sometimes attending through the whole course of the dis=

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disease at other times subsiding soon and not again returning — the determination to the head is in a few cases so violent as to occasion some mental confusion from the outset — The face now becomes flushed, the skin hot and dry, the eye inflamed and suffused, peculiarly sensible to light and a pain frequently felt in the ball itself; it is sometimes brilliant and expressive at other times dull and heavy somewhat colored with a biliary tinge — The thirst is excessive and can scarcely be satisfied, the patient being greatly relieved by the agreable coolness it imparts to his parched tongue and fauces — The respiration is irregular hurried and laboured — The pulse full and bounding, frequent and irregular varying from 120 to 130 beats in the minute — The countenance expresses the deepest anxiety and solicitude, the bowels generally in a torpid state, although in some instances diarrhea or dysentery are precursors of the attack — If stools are obtained, they are of a dark brown colour, frequently mingled with mucous and the patient in passing them complains of a burning sensation around the verge of the anus — The tongue which in the commencement of the disease presented an ash coloured white appearance is now changed to a golden yellow or dark brown with a peculiar

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liar red line around its edges; this foulness increases as the disease advances until a crisis is formed when it falls off and leaves a clean surface underneath, in some cases it is moist, in others dry — The stomach is frequently in so irritable a state as to occasion a great deal of trouble and inconvenience, and in a few cases I have seen, where the patient had been without medical assistance for several days, this symptom had proceeded to such an extent, that no measures devised could check it — When not (soon) overcome it is certainly one of the most ungovernable and distressing symptoms we have to obviate. — Nausea at least accompanies every well marked case. In fact the disease nearly always makes its attack in this way — The urine also is high coloured, and scanty, causing a scalding sensation along the urethra when passed — This state lasts from 18 to 24 hours, when generally the paroxism leaves the patient with at least an abatement of all the most violent symptoms — The heat and flushing of the face and forehead disappear, the turgidity of the bloodvessels and sensibility to light of the eyes subside and the whole countenance regains its placed and tranquil appearance — The pulse returns to nearly its natural standard — the skin in some cases is covered with a profu-

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fuse diaphoresis, or is soft moist and pleasant – the pain in the head back and legs are greatly moderated and his extreme restlessness forsakes him – His friends are now inspired with the hope of a permanent recovery; but alas, too often are the most sanguine hopes during a remission, blasted by the succeeding exacerbation and short time but serves to dispel the illusion – The duration of these remissions vary, and are generally in proportion to the violence and duration of the exacerbations – In some cases however no material remission takes place, but the disease taking on the continued form, runs its course uncontrouled, on to death – But in some cases there is a distinct intermission which lasts for a few hours only. Soon, if not controuled by previous remedies, the exacerbation returns with increased violence and renewed vigor to the assault – The pain over the Epigastrium becomes greatly aggravated, anxiety resumes her station, the pain in the head and legs are insupportable, the pulse is tense, frequent, and intermitting, the tongue brown dry and parched, the stomach exceedingly irritable, the patient sighs frequently and deeply with laborious and quick repeated breathing, his discharges are deeply tinged with bile and in some instances I have

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ven pure bile spit up without exertion or retching — From this uni-
versal disturbance of the body, the mind does not escape — Delirium
sometimes low and wandering at others wild and maniacal assails the
unhappy patient — So such extremes does this extend that no account
of their feelings or situation can be obtained from them, and frequently we
were compelled to bind them to their beds to prevent them from injuring
themselves and others — no efforts could induce them to take medicines,
but they became violent and outrageous, expressing themselves incohe
rently about some domestic concerns or wishing to avoid some dan
ger which they apprehended would befal them. — This state of things
cannot necessarily be of long duration — A crisis usually takes
place on the seventh day, but in the severer cases death relieves
the exhausted patient on the third, fifth, or sixth day — Should he
survive beyond these periods, he is doomed to endure a long and
protracted convalescence, or after thirty or forty days of dis-
tressing illness, at last sink in the grave around which he had
so long been hovering — Jackson in his sketch of Febrile diseases
says, "that a recurrence then takes place, sometimes on the same
base, and sometimes on a different, it proceeds through another
septenary period at the close of which it ceases or changes its

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rome" — after which — "another course commences and proceeds to another termination" — so on through several merciful death or long and tedious recovery is the result — When by judicious treatment or his strength of constitution, the patient has passed beyond the first course above delineated, we are then to look for another set of symptoms, somewhat modified in their character, but essentially the same & founded on a similar base as before — The tongue becomes clean and often of a shining red appearance, sometimes rough and dry with a thin light coat or epithelium over its surface — sometimes black and crusty — the teeth are covered with a thick black sordes — the thirst increased to a tormenting degree or not more than natural — the bowels in some cases locked, in others a slight diarrhea attends — The colour and quality of the evacuations are also various being either black or greenish, thick and viscid or thin and watery, sometimes copious at others very scanty the skin is either constricted and withered or relaxed and flabby and frequently of an olive colour or cadaverous appearance — the perspiration cold and clammy, sometimes profuse at others very little or none at all — sometimes over the whole body at other in particular parts as the neck and shoulders — The pulse slow

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weak and flagging or hard and jerking — Delirium is also a frequent attendant at this period, although it is sometimes violent yet more frequently it is of the low and muttering kind, the patient picks at his bed clothes or catching at something around him — if spoken to he looks with a vacant stare in your countenance, and either answers unmeaningly to your question or with an idiotic smile remains silent — About the fourteenth day of the attack something like a second crisis forms — this is marked often by a free flow of urine, sometimes by evacuations of a bilious character generally very copious — It now takes on a new character, assuming somewhat of a typhoid cast, in fact it is a mild degree of typhus — This period is characterised by a continuation of delirium, for the disease appears here to have located itself upon the brain — the patient is feeble, lies upon his back and seems much disposed to sleep, his eyes are languid his tongue hard and dry sometimes clean at other times covered with a dark fur and tremulous — the teeth encrusted with sordes — skin dry — foetid breath — the bowels either torpid or labouring under constant diarrhea and the spots on which blisters may have been applied become gangrenous — This state of affairs bespeak the utmost and most fearful degree of debility and should our patient

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tient survive it, his recovery will be long unprofitable and seldom perfect, for the structure of the principal organs of the abdomen is often more or less disordered, and renders him liable to a valetudinary existence or constitutional cachexy which ultimately terminates in incurable decay" — One form of this disease and by far the most important and dangerous is, when the disease has been taken in the country — generally appearing in strangers whose imprudence or occupations render them liable to an attack; such as boatmen stage-drivers &c — These cases are very irregular and require the most vigilant caution of the practitioner to detect and manage — After the second or third day of his illness the patient feels perfectly well, complains of no pain, perspires freely, his skin is cool and pleasant — he walks about the room sometimes within an hour of his death, even appetite returns and the only mark of disease which presents itself is great thirst and a sense of weariness — But these circumstances are apt to be fallacious — Often I have seen them with all these flattering circumstances in their favour suddenly take a fatal relapse without any apparent cause and expire in convulsions — Such is the character of one of the most destructive calamities

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afflicts our section of the country — I would gladly have delineated them in a less severe and important form, could I have done so compatible with truth, but I have prosecuted with the same principles I set out with. viz: those of facts and observation. ——

Having marked out the course of the disease I shall next proceed to speak of its Prognosis — As all diseases and fevers especially are a compound of morbid unsalutary symptoms their tendency to a happy or fatal issue has been carefully watched and a decision formed by the prevalence of one or the other — This rule would hold good and a proper principle for prognosis be established were always the same set of symptoms to lead invariably to the same results — But in the disease under consideration, its character and forms are so varied, its changes so rapid and unaccountable, that we scarce ever dare to confide upon any symptom however favourable, or ought we ever to assign a person to his fate, unassisted by the medical art, however desperate his case may appear — It is our duty to watch with the most scrutinising attention its progress, and never to believe the patient certain of recovery before he has nearly regained his former strength

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and vigour. These remarks are not unimportant, for to one unaccustomed to its insidious character, everything may appear in the most proper and favourable train towards recovery, when one of its sudden changes may occur and at once deprive the patient of his existence and conclusively prove the fallacy of his opinions — Since then this branch of the subject appears to be involved in so much difficulty, it can scarcely be proper to establish any general principle, ~~[illegible]~~ our decision must materially depend upon various circumstances and incidents which may occur during the progress of the disease. — I shall now proceed to recount those symptoms which are commonly supposed to be unfavourable — The age, constitution and habits of the person demand some attention for the robust and plethoric are more liable to suffer from its attacks than the thin and spare — Should the patient be intemperate or what is called a "high liver" we shall have reason to fear the results even in the mildest form — Strangers also are far more severely handled by it than natives, indeed if lately arrived they not frequently recover from it — When the periods of the coming on of the exacerbation are anticipated, we would draw unfavourable conclusions — When the skin is dry and cold or the

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hæphoresis, if there is any, be of short duration, cold and clammy; — should his stools be black and very fœtid, a low muttering delirium picking at motes in the air, or at the bed-clothes — his pulse low and feeble, tremulous and intermitting sometimes not perceptible even at the elbow, with subsultus tendinum or crossing of the tendon over the artery; his breathing short and laborious; his urine high coloured scanty and turbid, a cadaverous smell of the body, weak and faultering voice, hemorrhage from the nose or other parts; his tongue tremulous and covered with a dark encrustation & with a collection of sordes about the teeth, cold extremities, coma, constant disposition to vomit his drink and our remedies incapable of producing their accustomed effects, When in addition to all these, the patient takes no notice of his physician or friends or any of the ordinary occurrences of life, but becomes churlish, cross and gloomy; when we observe that those spots upon which blisters may have been applied become gangrenous or have a tendency to it, we may be assured that the utmost danger threatens and the case is almost desperate — On the contrary if the patient is a native, temperate both in eating and drinking and

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timely resorted to medicine, his exacerbations prolonged, emissions of some duration, his skin soft and moist - and diaphoresis lasting for some time, his pulse nearly that of health, his tongue clearing away, no nausea or hiccough, and the stomach gradually acquiring its tone, and appetite for ordinary food - the evacuations destitute of uncommon fetor and assuming a more healthy color - the eyes lively and animated, and what is an almost certain symptom, the breaking out of cat boil, or phlegmonous tumors over various parts, called critical abscesses; if deafness also comes on in the latter stages dependant in every case I have seen upon abscess forming in the ear, when in addition to these the fever appears to assume a tendency to take on the intermittent form, and the patient becomes more kind and affectionate to his relatives and Physician, it is then that "Hope half mingles with the sick man's prayer" - and we are induced to look forward to a favourable termination to our cares and labours, and to the re-establishment of his health and vigour — Having now established my prognosis I shall next proceed to speak of its diagnosis

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o the manner by which it may be distinguished from any other disease of a similar kind — This I conceive to be an important point as it is impossible for us to treat correctly a disease before we know what it is not — From its peculiar and well marked symptoms it is seldom that it can be mistaken for any other — But as its identity with yellow fever has been insisted upon by many, I will devote a few words in opposition to their opinions and shall state the most striking difference of symptoms, post mortem examinations, and other material circumstances connected with the two diseases — And first the tongue which is seldom in its first stages destitute of that fur, red and thick, fur formerly mentioned, is in Yellow Fever says Dr Irvine of Charleston — "clean, gummy, being very seldom foul or covered with a white fur" — In bilious fever although in some cases where its first stages have not been attended to, there is a most distressing & constant degree of vomiting yet it is far from being invariable in every case — Now in yellow fever the Doctor continues "the bilious fever in its latter stages, the patient is prostrated

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led, yet the practitioner cannot as in the fore-mentioned disease avail himself of the aid of stimuli to arouse through the medium of the stomach the dormant and flagging functions of life; being precluded from this, chiefly, from the peculiar irritability of stomach in all yellow fever patients, which renders it little less than death to administer any thing of an exciting or stimulating quality. "It is seldom in Bilious fever that the irritability of stomach progresses to such a degree — Flatulence is also a other symptom of yellow fever, which we seldom or never meet with in the other. — Hemorrhage from the nose, gums and eyes from the eyes, you frequently meet with in the former and seldom or never in the most violent cases of the latter — Petechia is also a frequent symptom of the one, in every case I have seen, I have never observed it in the other — In yellow fever, its subsidence is never marked by any critical or perspiratory discharge — In bilious fever we all know that a remission never takes place unless accompanied by some discharge from the the perspiratory, urinary or other organs — Having stated

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the most striking difference of symptoms between the two diseases, I will next compare the post mortem examinations - And here I will derive great assistance from the enquiries of Dr. Physick, than whom I can bring forward no more satisfactory authority, and whose researches on this, as well as other subjects, have shed a refulgence on our science as lasting and splendid as his fame will be immortal - My own dissections of the numerous cases which have occurred in our Hospitals fully demonstrate that these views are correct - The Liver in Yellow fever, is usually of a pale and flabby appearance, on the contrary in Bilious Remittent, that organ is turgid, enlarged and of a blue or chocolate colour - the matter of black vomit ejected, or found in the stomach and sometimes in the intestines, has never been discovered in the gall-bladder, liver, or any other viscus or cavity - The stomach has been loaded with this substance, when the liver and gall-bladder were perfectly healthy - Besides the matter itself is essentially different from bile, the former being sometimes acid, and when separated from extraneous substances, entirely insipid; whereas bile can never be divested

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of its inclusive bitterness — Its appearances also are essentially different, for if a portion of the former be poured upon white paper it will leave a dark coloured mark with small black specks, but if the same experiment be tried with the latter, however concentrated it may, or however dark it may seem upon inspection, it will still display the same biliary tinge. These facts fully evince that the black vomit is not a secretion of the liver, but rather of the stomach, induced by some peculiar irritation analagous to that caused by poisons — There are also many external circumstances which prove the non-identity of the two diseases — Should any person reside a length of time in a place where yellow fever is frequently prevalent, he may be fully assured of safety for the future, but on the contrary no length of residence can secure one from the attacks of Bilious Fever — And should he be attacked by the former it recover he need never fear a recurrence of the attack — This point has been strongly disputed, but the greater part of the medical world are now fully convinced of its truth — The recovery also from yellow

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fever is quick, whereas that from Bilious fever is slow tedious and gradual, leaving the system almost completely shattered, continually liable to relapse, and the patient more and more liable from every attack to the recurrence of an other — Another fact for the authenticity of which I can vouch, is, that, the inhabitants of our city consider themselves perfectly secure from Yellow fever during its prevalence, whilst during the same season it would be considered an act little less than madness, for one to go into the country — These few but striking facts are surely sufficient to convince the most sceptical ~~of their error~~ —

The state in which the system is left, after frequent attacks of this disease, is a point deserving notice. This consists of a chronic derangement of the functions of the hepatic & pancreas; in fact all the viscera of the abdomen are more or less involved — Should a traveller, pass through the lower section of our State, he would every where meet, among the lower and indigent order of society, with persons strongly marked with the ravages of this or Intermittent

lent disease: as sallow complexion, emaciation, and a gen-
eral cachectic diathesis — These appearances are accompan-
ied with irregular bowels, chronic diarrhea, high coloured
urine, hard hardness and fulness over the liver, nausea in
the morning, dry cough, sometimes slight fever in the
evening, with oedematous swellings about the face and
legs which but too frequently terminate in fatal dropsy.
From the well known sympathy between the Liver and
brain, the last organ I have also seen seriously affected.
We have at present two instances of this in our Hos-
pital. In one case it terminated in Intermittent of
the tertian type, of a most singular character — The
paroxysm being only discoverable, by a fit of low spirits
and weeping, while the apyrexial state was marked
by a corresponding degree of exhilaration. This singula-
rity was cured by the usual remedies for Intermittent
but his idiotcy as in the other case remains incurable,
they were both frequent by the subjects of this disease.
I shall next cite a case strikingly illustrative of the
derangement of the abdominal viscera — From one of

in patients who died this summer, we took a spleen weighing eleven pounds which is preserved as an anatomical curiosity in the Hospital - This man had long been an overseer on some of the plantations in the vicinity of our city, of intemperate habits and a frequent subject to, both, Intermittent & Bilious fever - Johnson asserts, that these chronic derangements, especially of the liver, are but too often the result of long residence between the tropics - With regard to its termination in dropsy, this occurs too frequently to require proof or be surprising to the pathologist -

Post mortem examination - Dissections of persons who die of this disease, satisfactorily demonstrate that the action of the morbid cause exerts its influence immediately upon the contents of the abdomen - Jackson asserts that "they do not exhibit the disease in action, but the havoc which it commits upon organic structure" - And first the brain in protracted cases or those in which cerebral symptoms were prominent appears to be a partaker in the general injury - The vessels of the dura mater were turgid, and frequently effusion was found between the membranes of the brain and sometimes in the ventricles themselves

but

but in the generality of cases the gastric or abdominal symptoms are more frequent — In those which I have examined, the liver was uniformly hard, turgid and very much enlarged with other signs of congestion and of a bluish colour. The gall-bladder always distended with bilious matter, of a deep brown colour, and tarry consistence - the stomach sometimes containing a fluid of a green colour, then and resembling vitiated bile, at other times nothing more than the nourishment or medicines used a few moments previous to death - When the internal surface was exposed the vessels were turgid, and frequently an infiltration of blood seen between its coats - the intestines not unfrequently partook in the above appearances, as in some instances shots of Sphacelus were found upon their surface, especially if dysenteric symptoms had attended. Often adhesions were formed between the liver, stomach and peritoneum - The Spleen seldom or never escapes the derangement of the surrounding viscera - These are the most striking and common appearances of dissection - indeed they seldom vary - They satisfactorily prove that the abdominal viscera are the principle sufferers - Let us next enquire

what

that are the causes which produce such deleterious effects upon the animal economy — These I shall divide into the remote — and the exciting or predisposing. The remote cause of this disease is undoubtedly Marsh Miasmata — It is by this that various quarters of the globe, have been depopulated It is a well established rule that those countries which are favorable to vegetation have a contrary effect upon human existence, and that a low flat country gives rise to many disorders modified by the various combinations of heat and moisture — Can we then wonder at the extensive production of a deleterious miasma in some parts of our State, when we take into consideration the local circumstances under which we exist — The lower portion of Carolina for forty or fifty miles from the ocean is but one continued body of low marshy lands, exposed to inundating floods, and the scorching rays of a ~~tropical~~ sun — As marsh miasmata then are generated by the combined action of heat and moisture upon vegetable matter, and as our lower counties abounds so much in rice fields and stagnant ponds, it must be sufficiently evident that

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able materials are afforded for the production of this noxious principle. I will now speak of the exciting or predisposing causes. These are various and are such accumulative circumstances as tend to bring disease into action and not to form it. Among the principal of these is change of climate. The nature of our climate (like all other under the tropics) is somewhat assimilated from both to its sudden and dangerous vicissitudes, which says Dr. Ch. "have been demonstrated from the time of Hippocrates." This fact is illustrated in the age of emigration, in those persons who remove from Northern latitudes or Eastern countries. This may result from the fact that other countries may deprive to a phlogistic diathesis, and the few when persons arrive among us from these regions, the nervous power acts upon a system altogether unaccustomed to its influence. But this is not only true with regard to strangers but even natives of one section of the U.S. removing to another with ~~invariable~~ impunity. A second and very frequent exciting cause is intemperance, especially among foreigners. Health seldom is secured when

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we recollect what organs are the principal sufferers in this case. Whatever tends to debilitate the system is an exciting cause, therefore a person habituated to the use of ardent spirits becomes weak and emaciated, his liver and its secretions are disordered and vitiated, in such a situation the slightest exposure to the remote cause would be dangerous if not fatal. The passions and emotions of the mind also are other causes which predispose to the reception of this disease, they are generally of the depressing kind as, grief, anxiety disappointment or fear &c – nor is this fact restricted to individuals alone, but the same effect will be produced upon bodies of men. Thus Johnson informs us that as long as the army which besieged Flushing were elated by the expectation of battle and the certainty of conquest, although exposed to the causes of fever in their most concentrated degree, still they remained healthy; but when from some manœuvre of the enemy, the expedition failed, and the more saddening rays of disappointment were substituted for the cheering beams of hope, then these combined causes began to operate and disease

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other then rankle to a most alarming extent — It has been
said that fear produces the most striking effects in aiding the re-
mote cause of fever, this may exist in some measure for
its causes among others — These are the most common
causes of this disease, but there are many others, the details
of which would be both tedious and unnecessary

Treatment. We have now arrived at that most im-
portant branch of our subject, which treats of the "Modus medendi"
and requires the most earnest attention of every practitioner,
both, as regards the preservation of the life of his patient, and
reputation — But such are the various appearances of the
disease and such various modes of treatment have been recommen-
ded by authors of estimation, and so much depended upon that
in our first chapter we are confounded and perplexed —
It should be recollected that the same disease is much, tho' not
altered by variety of climate, and that every constitution rela-
tive to man demands a change — The disease in another
to one is much often we are obliged to attend solely to symptoms
and at other times there is no indication to which we can
annex our measures — In such instances the knowledge of

and as the morbid appearances of dissection in combination with previous symptoms will tend to lighten our path through this perplexing maze. My plan therefore is to recount that plan of practice which I have seen used and which was certainly proved as successful as any other which has been recommended. As the disease is decidedly inflammatory, vascular action must be reduced and for this purpose the lancet appears to be obviously proper. But although this may appear sound and correct in theory, and has received the unqualified sanction of many meritorious practitioners, still experience, the most infallible test of truth, has compelled those in our climate if not totally to reject, at least to limit its use to a very small number of cases. It is a well known fact, that even in health caution in the use of the lancet is requisite in the high temperature [illegible] constitution might [illegible] of themselves sufficient causes to induce debility; but there to this is added the influence of the disease itself it cannot seem strange that prostration is almost an [illegible] result of the practice carried to the extent practised in the following [illegible] but [illegible]

[illegible]

[illegible] sometimes in the

[illegible] we then conceive that

[illegible]

the disease — But I would not be understood totally to reject its use, some cases imperiously demand it; when, for instance we are called to a patient of robust constitution with violent throbbing of the temporal arteries, great pain in the head, back and redness of the eyes and a high excited circulation we may then resort to bloodletting — And as no specific rules can be established relative to the amounts to be abstracted, we should be regulated by the circumstances of the case, always bearing in mind that this is the only period in which we can ensure us its beneficial effects, then it seldom can be repeated, that if taken in its infancy the disease may [illegible] be arrested, but if allowed to progress, it will soon become triumphant and overpower the system — having then [illegible] in view, if necessity commands, we should bleed at once freely, or else make some decided impression upon the system — And we should attend to these circumstances particularly.

the latest examined tablets from Europe or any other portion of the United States, for contrast. I shall have in my hand a very interesting communication, that has, of course, to be attended and a highly excited, rather more than usual, of Mr. Jones, Dane and Spencer. But still in the general type of disease no satisfactory determination exists. It would be highly unwise in a position ~~this~~ extremely varied and vital. But what are these? I shall show that the use of the root is generally probable or certain. I shall therefore next speak of the efficacy of emetics. They are among the most useful class of remedies, not only as mere evacuants, but as by the strong sympathies they make with the stomach, the primary seat of the disease. I commence with them as I intend, and deem it practice. In many instances, nature prescribes, and hints out the path to be pursued. In robust males, and negroes, the most efficacious with Dr. Jones and Mills. Ipecac is such an emetic, and more effectually evacuates the alimentary canal than any other, having the combined benefit of both classes of remedies, but being harsh in its operation.

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is not always suitable and a milder one may be substituted for it consisting of Ipecacuanha aux Tart. Antimony which should also be assisted in its operation by copious draughts of Chamomile tea or warm water. The Tart. Antimony may be used alone, and there is no other more peculiarly fitted for diseases of this nature being more revolutionary in its effects, to which are add. the invaluable advantages of febrifuge, diaphoretic, cathartic and somewhat tonic qualities. It is very freely used with considerable success by our Planters on the earliest appearance of the disease but unfortunately its emetics cannot always be used although when allowable they may be repeated once or twice if there is necessary. They are most often restricted to the early stages. In many instances the stomach is so painful and tender that their use is precluded from the fear of increasing inflammation and in addition to these objections, this organ is often so irritable, that by running one, we incur the risk of giving it a habit of vomiting which would prove both difficult & often impossible to arrest. Still with all these obstacles to their use, emetics taken in a general sense are decidedly by no other remedies during the early stages. The next remedies which I shall take notice of are the antiphlogistics which for their detailing

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and evacuating effects, whether previous or subsequent to the administration of an Emetic are very beneficial. Of this class of remedies there are so many, nearly all of which may be judiciously used, either alone or in combination, that I shall only take into consideration those which are in most general practice. It is customary with many to commence the treatment with cathartics and this has often proved successful but the most usual plan is to premise an emetic, to be repeated if necessary, (especially if nausea or vomiting ushers in the attack.) after which a succession of cathartic medicines are administered to objects of bowels. In robust constitutions I have seen a combination of Gamboge, Aloes and Tart. Antimony used with decided benefit, to which may be sometimes added, small portions of Calomel. This often stops at the root of the disease and health is speedily established. Calomel alone is excellent and Johnson has recommended it in drachm doses three times a day, but its operation is rather too slow and requires the union of some more active article to hasten it. Salap has been long used for this purpose, and with acknowledged benefit. In desperate cases, and where we wish

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to produce ptyalism quickly. I have seen from three to ten grains of Calomel given every two hours and a small dose of Sulph: Soda in the intervening hours; this has always proved the most speedy method of subjecting the system to the mercurial influence, which certainly is an exception to the rule, that if we wish to produce salivation, Calomel should not be given to the extent which forces purgative. the reason for this apparent contradiction, I will not attempt to [illegible], but will vouch for the fact. During the last summer however this medicine was little used in our Hospital, and a combination of Sulph: Soda and Jalap was substituted with equally successful results, without any of the distressing and odious consequences of the mercurial practice. The cases however were evidently milder than ordinary seasons. In my own estimation, nothing will be found so good as Calomel in the violent forms of this disease. Small portions of Tart: Antimony may be often added so as to excite action upon the skin. Diaphoretic medicines although very useful, should by no means be relied on, as auxiliaries they

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more beneficial. They are generally preferable in the early stages when in combination with some cathartic as Jalap — Cathartics however will not always remain upon the stomach, to obviate this a resort should be made to some neutral mixture — The saline mixture either in a state of effervescence or not; lime water; are many others used for this purpose — As another method for reducing inflammatory action, by no means the least considerable is the cold bath, it is only astonishing that it should so seldom be used, when we reflect how grateful and desirable it is to all feverish conditions — There are three methods of administering it, viz. affusion, emersion and sponging — The first is the most powerful, the last is the least dangerous — Affusion is performed by placing the patient in a large tub and several buckets of water are poured over him, if this is thought inexpedient the second may be resorted; but many persons refuse to submit to either of these, we may then sponge them or wrap them up in wet sheets — As a substitute for water we may often use vinegar, or brandy, whiskey or rum, these last impart a most agreable sensation by their evaporation. But like all other remedies this is also at some periods improper —

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its necessity is indicated, by a hot dry skin, great determination to the head, with a full flushed face and full, hard, frequent and tense pulse. Currie advises its use when the exacerbation was very high or immediately after its declination has begun. Its use is contraindicated when the skin is cold clammy & moist, feeble pulse or much below the natural standard of debility. Should the patient remain cold and chilly any length of time after its application it should be immediately abandoned. These are the principle remedies during the first or inflammatory stage, with them we should keep our patient cool and quiet, not too much light, very little company or none at all, every thing about him clean, and his room frequently sprinkled with vinegar to prevent any offensive smells. Keep constantly in view that while we reduce morbid action, to husband the powers of the system and lessen as little as possible the vis vita. Another remark of the highest practical importance, is; that during the remissions your utmost skill and energy should be exerted, as it is then that remedies act with more promptness and fidelity; time them so as to meet the returning exacerbation. Medicines administered during the exacerbation

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lation are useless and often injurious —— But it is not with a single blow that we can hope to destroy this disease; we can only succeed by a constant perseverance of active remedies — Inflammatory symptoms still running high, we may change our mode of depletion to the diaphoretic plan, and then of the mild stimulating kind combined with purgatives — The best used in this purpose is the Sulph. Soda and Sulphuretted Lime; and as our dilatory to these may be used such alleviations as relax the external surface — A vapour bath of any kind may be used — This may be so easily effected, and has often been of such signal benefit, that it would be criminal in us to neglect it. Should a regular apparatus not in at hand, all the beneficial effects may be obtained by wrapping up a heated brick in a blanket, and introducing it under the bed clothes, (which should be commodiously arranged that the vapour may be more equably diffused) upon this is to be poured vinegar or any thing else, hot — Often at this stage there is excessive irritability of stomach; which may be relieved by a blister to the Epigastrium — I was told by a respectable practitioner of our City that by the application

[illegible] of one along the spine during the remission, so timed, as to [illegible] on the return of the convulsion, it was either prevented or rendered much milder, in every case in which he had tried it – But this one of the most troublesome and [illegible] as-sing symptoms is contended with and requires most precious care and attention – More than once I have seen it last through all the [illegible] case without any intermission and the practitioner unable to check it by any means devised – Should your stomach be the [illegible] and the patient have sufficient strength remaining, an emetic may prove serviceable, but after continuing some time, the patient becomes exceedingly prostrated, and we must resort to every remedy which may have the least probability of success. [illegible] nais, by anus, both combined and uncombined, in short all efforts should not be relaxed for a moment – Soda water in a state of effervescence, nais, grain opium, pills given as often as circumstances may indicate, the effervescing draught, [illegible] [illegible], vol: alkali, blisters often repeated, mustard & [illegible], strong brandy and water, infusion of Coffee, six grain capsicum pills, ginger, cloves, cinnamon &c, have often proved good, but all sometimes fail – Here a resort to mercury will often prove of=

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efficacious; but too often unfortunately forces the stomach well not to receive this — In the truly alarming crises, I have two cases, in which having tried nearly all the above remedies without success, the tartar emetic was tried and succeeded — It was given to the extent of one drachm every half hour, combined with brandy & powers appear to be increased — Should we be led to suppose that it proceeded from excessive inflammation of the stomach, and the patient be of robust and plethoric habit, and before any symptoms of prostration are present I have thought that venesection may be tried on the same principle as in Gastritis; or when no internal remedies can be given, why not use mercurial ointment well rubbed over the whole surface, so as to affect the system — These plans I have never seen tried, but have suggested to me by reflection on the disease — Constipation is often an obstinate symptom of the disease and we should neglect nothing to overcome it — if in the early stages, tea may be tried as a relaxant, arising as some have supposed from spasm of the intestines, on the same principle the warm bath is highly recommended — Enemata, suppositories of soap or tallow & many other remedies of like nature have been

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used — As direct rules cannot be laid down for every case which may occur, we should be prepared for every emergency — Among other embarrassing obstacles to the comfort of the patient and administration of remedies is cough. This is more frequently attendant on the latter stages, and requires all the patience of the sufferer to bear, as well as the most constant and harmonious exertion of the practitioner to remove. Of the remedies we have observed; musk, opium, camphor, castor, & the, all the volatiles, aq. ammonia, carb. Potass. are all serviceable. It has been known to last for 8 or 10 days. In one case where it had existed for four days, without any intermission, and without being affected by the various, blandishments resorted to, Tr. Senna was given in doses of one drachm every half hour combined with brandy and in a few hours totally cured it — Asthma must distressing and alarming symptom, depriving the patient of all rest and gradually wearing him out, we should not relax one moment in our efforts to remove it — All the symptoms if not arrested tend to produce a most alarming and often fatal prostration. Means are immediately to be called to our aid, Camphor in 5 or 10 grain doses dissolved in eight or ten ounces of water, Camphorated

water julep, serpentaria, seneka, Bark alone or in combination, the latter method is preferable — the nourishment should be arrow root and the best Spanish wine, wine whey &c — if strength still fails resort to general blistering, but in their use we should be cautious, as there are certain con: ditions of the system in which they will prove injurious — If high inflammation exist, they will increase local irritation, and cause unnecessary pain, but when timely used, they rouse and give a spur to the fatigued and dormant energies of the system, relieve local determinations, and are said in some instances to exhibit a narcotic effect — [illegible] paining [illegible] will be [illegible] the white [illegible] tongue [illegible] these should be [illegible] the general [illegible] the [illegible] stomach [illegible] but [illegible] surfaces [illegible] and again, [illegible] enjoined to the [illegible] in the most [illegible] cases, the disease has been arrested by [illegible] and judicious management — Having now spoken of the many remedies suited to the several stages and symp-

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toms of this disease, it may appear strange that no notice has been taken of that remedy which has been so emphatically called the "Hamilton of the Materia Medica", Calomel. But observing the numerous cases which were brought into our Hospital, I hope I may not be deemed presumptuous in me to say, that I think it the most effectual remedy that has been used in this disease, not only as a purgative, but in all cases of difficulty as an alterant. The indications which demand its use are various and I cannot use a better, than by giving them in the words of a respectable practitioner, in view — "If the disease makes its onset with peculiar violence; if the disease of the system generally or inflammatory action; if the powers of the constitution and the vigour of the patient seem disproportioned to the rage of the attack however slight it may commence; if the case notwithstanding be protracted, so as to wear out the energies of the system; if the patient sinks into a low condition similar to typhus in all these cases the use of that remedy, so much vituperated, is imperatively demanded" — It should be administered in doses proportionate to the circumstances of the case — If fever should arise from the commencement in doses of five or six grains every two hours or even more; the case appears to be [illegible] manner

[illegible] the grave cases, a termination [illegible] soon [illegible] should be administered — But it should be pursued [illegible], to use it with a proper degree of care and caution, as unfortunately we cannot [illegible] limit the extent of its effects — Troublesome cases & even death [illegible] often from [illegible] the [illegible] be [illegible], [illegible] ~~this~~ were [illegible] it proves to be useful — The patient should be carefully watched and should he complain of tenderness of the gums, or they present a spongy appearance, or small ulcers appear in any part of the mouth with an increased flow of saliva, it would be advisable to discontinue its use, as there is no benefit from ptyalism as a local affection, but it is to be regarded merely as a test of the system being under its influence. It is usually accompanied by a slight degree of febrile action, some heat of skin, quick pulse, inflamed gums, swollen face, profuse discharge of saliva and a peculiar and very offensive factor of the breath — It is a very troublesome affection and often productive of very troublesome consequences, but surely this should not deter us from its use, as any deformity in the majority of cases, is preferable to death — When this action is once fully established the original disease in most cases is subdued and made to disappear — But this is not an invariable result, often the two dis:

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cases alternate, the mercurial action predominating during the remissions and the disease during the exacerbations, thus continuing until death or final recovery crowns one or the other of the contending forces with victory. As the Calomel has been objected to by many on account of its consequences, I think that in slight cases and when the circumstances would permit, other mercurial medicines may be substituted for it. In the instances of children it is always dangerous, often producing from a species of the inflammation ending in gangrene and sphacelus. It has been recommended to use Cantharides to the extent of producing strangury on the principle of revulsion, having never seen the practice myself I will not presume to offer an opinion upon the subject —

I have thus endeavoured to give as concise a view of the general plan of practice as this extensive and interesting subject would admit, but before leaving it, I will take notice of that stage of the disease into which the system is liable to fall very closely resembling Typhus — the patient is excessively prostrated, comatose and then **delirious** with torpid bowels and irregular remissions and exacerbations — Too early a resort cannot be made to stimuli — We have here a difficult task to fulfil; our constant aim must be, to support the flagging powers of the system, and at the same time

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time keep the bowels in a soluble state. The most powerful stimuli of the Materia medica should be resorted to, and used both externally and internally; Blisters, Sinnapisms to the extremities, the head should be shaved and if necessary a blister applied, Brandy, Vol. Alkali, Wine, Bark &c. should all be tested in succession if one should not answer we must try another, so as not to destroy the susceptibility by too constant a repetition of one alone — Although we are timidly in the use of stimuli would be foolish & not criminal, as it would be far preferable to over-stimulate than to allow the patient to die without the use of them — Under all these circumstances, his situation is alarming and distressing, but we should not on this account despair, a single well directed blow may vanquish the enemy, and ensure us victory; double our efforts and even should they prove fruitless we will have at least the sublime consolation of having done our duty ——— But it does not always happen that our endeavours are unrewarded, they are are often crowned by final recovery — It is seldom however that the patient is emancipated speedily from the hands of the physician; I shall therefore come to a close with a few remarks relative to the treatment of convalescence — And here our attention is called to two circum:

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tances, the liability to relapse, and the predisposition to various affections, caused by this disease, on several important organs — we allow the bowels to be constipated, while at the same time we should not increase debility by active purging. As he can only derive strength from the proper assimilation of food, we must attend to his diet; he should be allowed to eat frequently but in small quantities. Small portions of Beef, mutton and animal jellies are among the best articles — We must be regulated by his former habits. If accustomed to them, thin soups and broths may be allowed sparingly — Should he be without appetite tonics may be used such as Quassia, Gentian, Cod liver oil, preparations of iron and many others — One of the best is exercise, which should be proportioned to the strength and never carried so far as to fatigue — The patient often complains of sleeplessness, for this also exercise is to be used, opium and also Hyoscamus. this last is, particularly good, having the advantage of an opiate without constipating — For the mucous sore mouth, blisters, astringent washes, oily frictions, cool dry air, domestic care and patience — Dr. Bell of Edinb. highly recommends the Hydro-sulphuret of Potash — Amongst the first things

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things to be observed with a convalescent patient is to remove him into another room, when this is impracticable, remove all the appendages of a sick room from his sight such as phials &c - in this way we may lead him to constrast his former gloomy, with his now more flattering situation - More light should be admitted than formerly, he may see a little company, allow his room to be well ventillated, but never place him in a draught of air, - do not permit him to engage his mind about former avocations, but should his time hang heavily upon his hands amusements of various sorts may be continued for him, and he should be allowed very slowly to return to his former employments - But after all our endeavours he will often complain of debility, slight fever, headache, costive bowels, and oedematous swellings - This is dangerous and denotes congestion of the liver and Spleen Sulphur may here be used with advantage, and if not relieved a slight salivation will seldom fail of success - Cold bathing and above all Exercise is useful -

Having now considered the most important circumstances incident to this disease, I shall end by declaring that though this essay may be both unimportant in matter and defective in style, still I

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would hold myself ready to vouch for the truth of the statements and details of practice which it contains ——— " ———